October 12, 2004

All Holders of The City of Springfield's
"Design Standards for Public Improvements",
"Standard Drawing Details for Public Improvements",
Dated 05-10-2002

RE: Submittal Standards

1. Replace existing drawing ST-7, Mailbox Replacement, with revised ST-7 dated 10-01-04. This corrects the height location of the mailbox to meet mail delivery standards.

2. Remove Drawings SS-5, SS-6, SS-6-R and SS-8 and replace with drawings SS-6 dated 10-01-04 and SS-8 dated 10-01-04. These two drawings change the curb inlet to requiring recessed curb inlets as the standard curb and gutter inlet.

3. Add drawing SS-15, concrete box culvert minimum reinforcement details. This standard is to be included on all plans requiring a box culvert as part of the project.

4. Insert sheets V-22 a, b, c & d, Revised October 7, 2004, Plan Review Checklist for Sanitary Sewers.

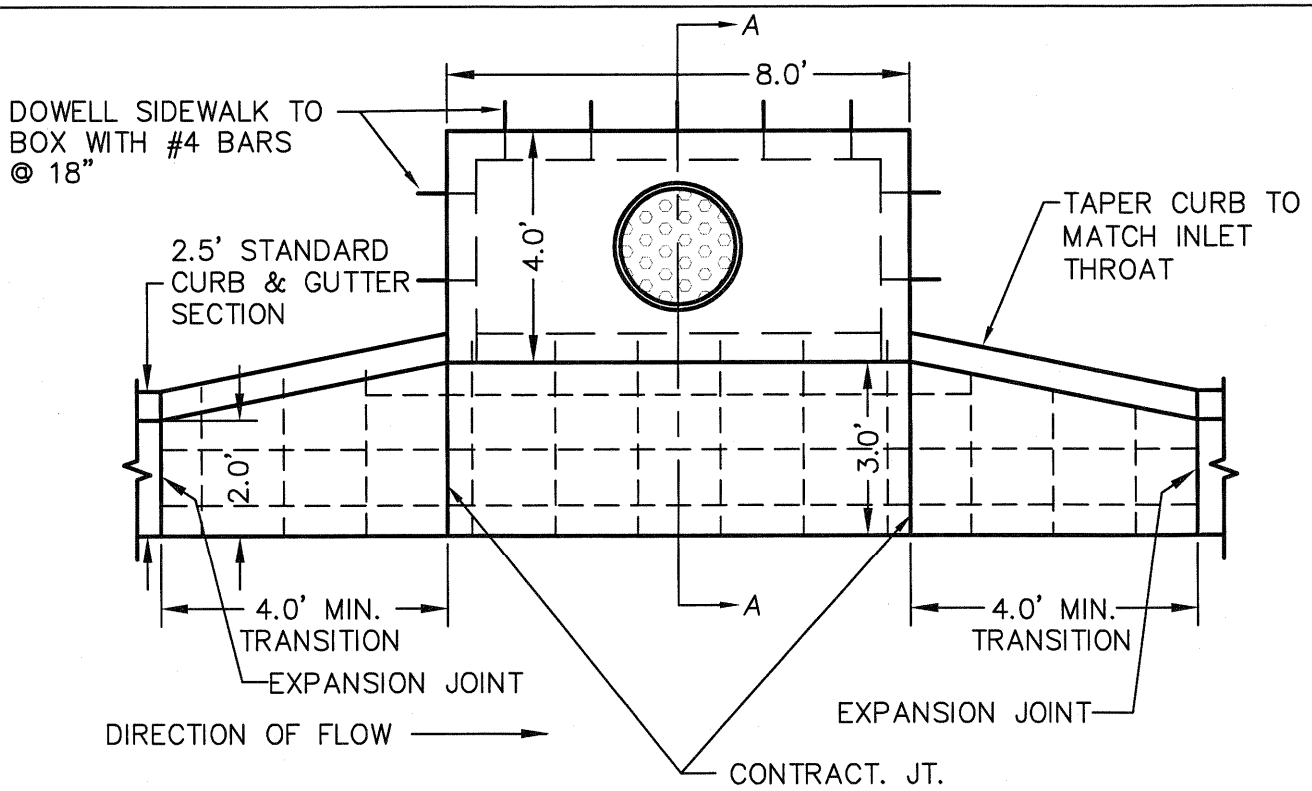
5. Add Drawing ST-18, Handrails. This drawing details the handrail material to be used when handrails will be exposed to the weather.

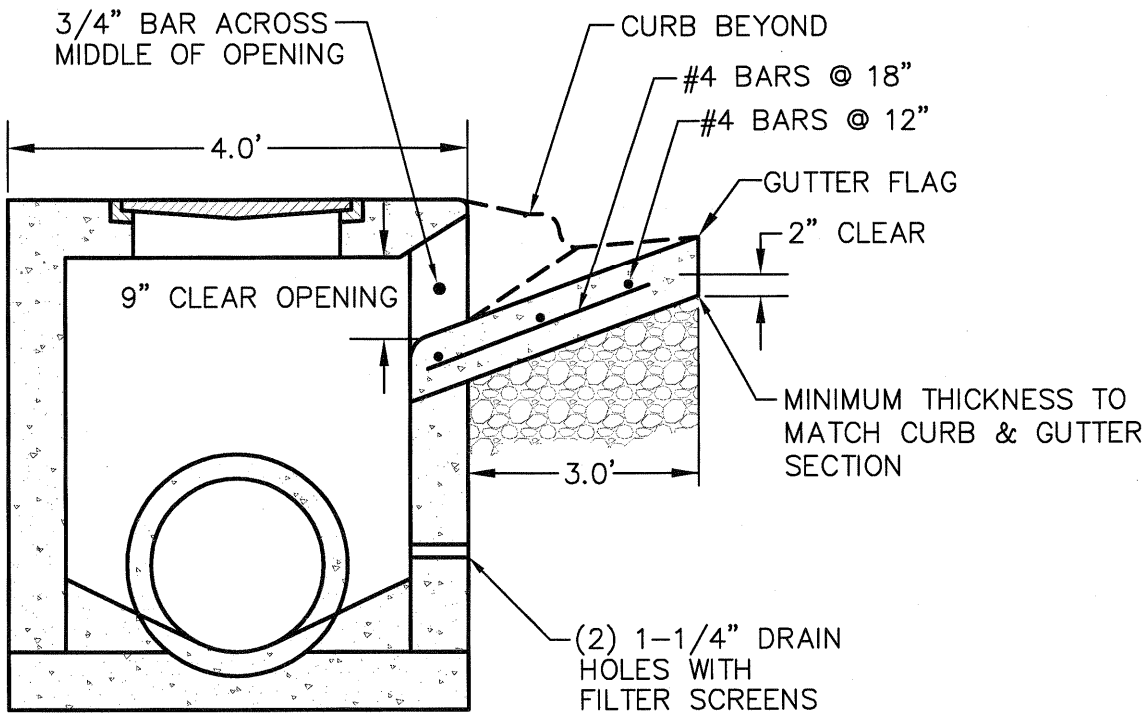
These revisions will become effective with any new plan submitted after November 1, 2004.

Respectfully,

Michael L. Giles, P.E.
Principal Civil Engineer

Cc: Posted on Intranet as submittal #1, dated October 18, 2004
Marc Thornsberry, Director of Public Works
Harry Price, Asst. Director of Public Works
Todd Wagner, Principal Stormwater Engineer

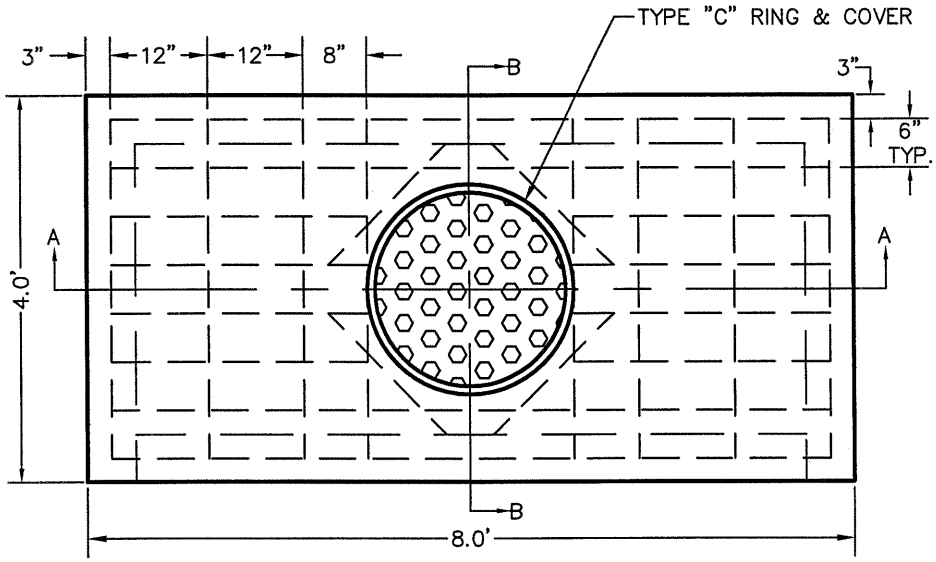


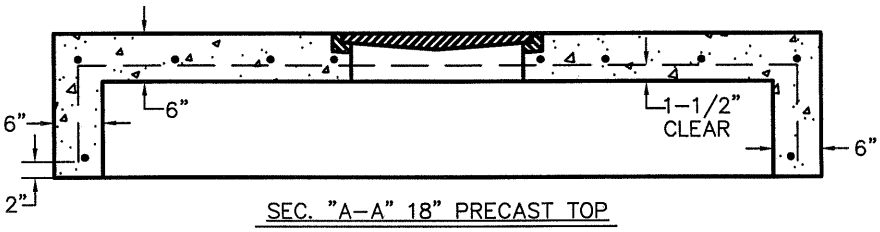


SECTION "A-A"

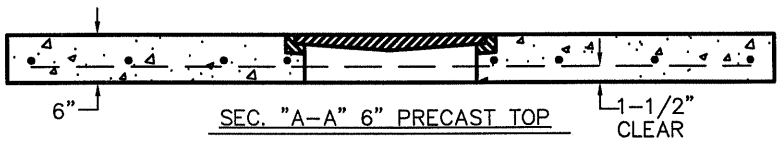
NOTE:
1. #4 BARS @ 10" O.C.(ALL WALLS, VERT. & HORIZ.)
2. IF CLEARANCE CAN'T BE PROVIDED FROM TOP AND SIDES OF PIPE, A MODIFIED INLET MUST BE USED.
3. 6", 12" OR 18" PRECAST LIDS MAY BE USED.
4. IF INLET IS NOT RECESSED, THROAT OPENING IS 7 INCHES.

DEPARTMENT OF PUBLIC WORKS SPRINGFIELD, MO.	CURB INLET	ADOPTED: 10-1-04
		SS-6

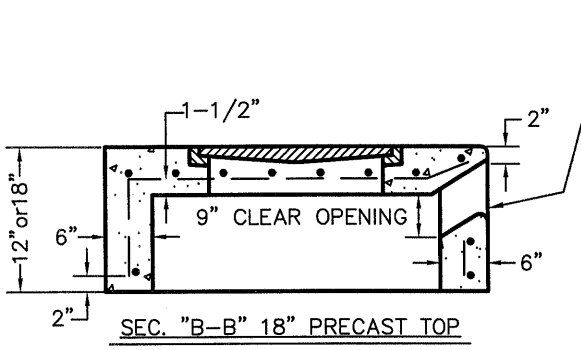




SEC. "A-A" 18" PRECAST TOP



SEC. "A-A" 6" PRECAST TOP



SEC. "B-B" 18" PRECAST TOP

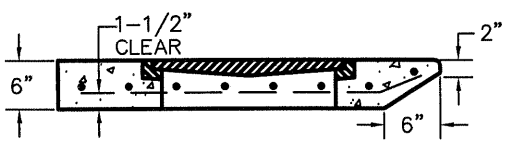
NOTES:

1. REINFORCEMENT IS THE SAME IN THE TOP SLAB OF THE 6" AND THE 18" PRECAST TOP.

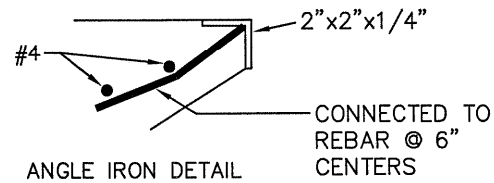
2. USE NO. 4 BAR THROUGHOUT.

3. 6" & 12" PRECAST TOPS TO BE PINNED AT 4 CORNERS.

4. IF INLET IS NOT RECESSED THAN A PROTECTIVE 2" x 2" x 1/4" GALVANIZED ANGLE IRON IS REQUIRED AS SHOWN.

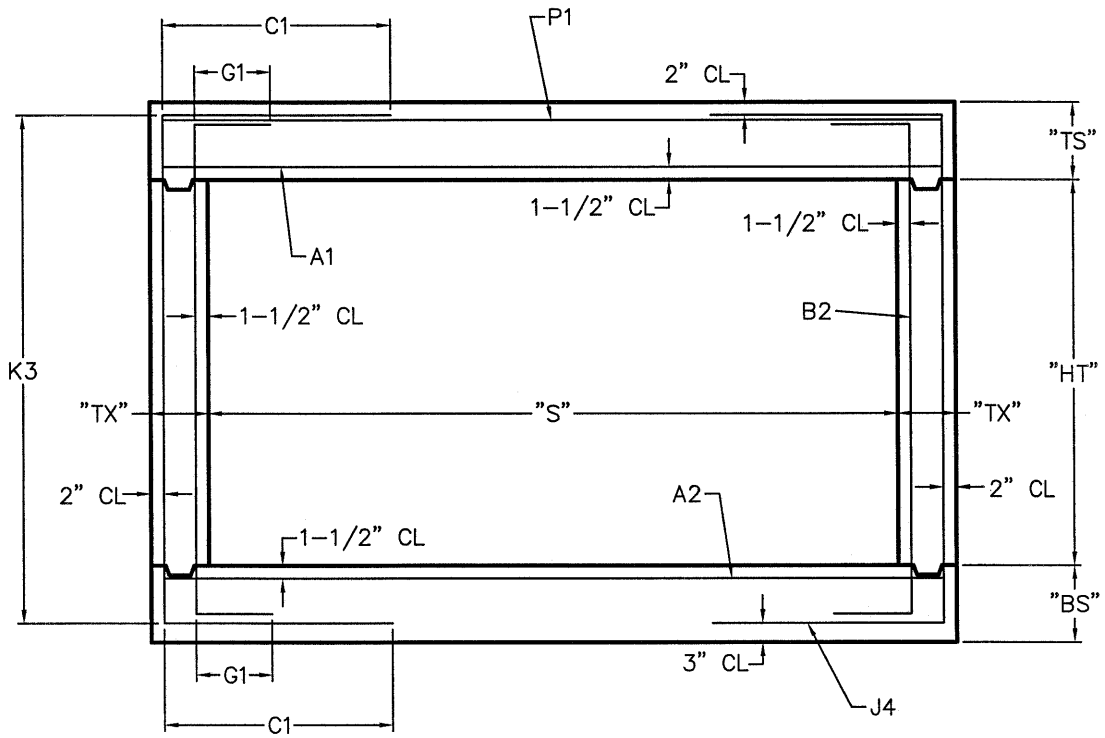


SEC. "B-B" 6" PRECAST TOP



ANGLE IRON DETAIL

DEPARTMENT OF PUBLIC WORKS SPRINGFIELD, MO.	PRECAST INLET TOPS	ADOPTED: 10-1-04 SS-8



TYPICAL SECTION TO BE COMPLETED AND SHOWN ON PLANS ALONG WITH LOCATION OF F BARS.

GENERAL NOTES:

1. ALL CULVERTS SHALL BE DESIGNED FOR HS20 LOADINGS USING CONCRETE, f'c = 4,000 psi OR GREATER, REINFORCING STEEL (GRADE 60), fy = 60,000 psi
2. LAP ALL LONGITUDINAL BARS A MINIMUM OF 23" AT SPLICES
3. ALL DIMENSIONS ARE TO BE SHOWN IN INCHES.
4. MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1-1/2 INCHES UNLESS OTHERWISE SHOWN.
5. F BARS ARE TO BE A MINIMUM #4 WITH SPACING LABELED ON SECTION VIEW.
6. A FILTER CLOTH 3 FEET IN WIDTH AND DOUBLE THICKNESS SHALL BE APPLIED TO ALL TRANSVERSE JOINTS IN THE TOP SLAB AND SIDEWALLS. THE MATERIAL SHALL BE CENTERED ON THE JOINT AND THE EDGES SHALL BE SEALED WITH A MASTIC OR WITH TWO SIDED TAPE. THE FILTER CLOTH SHALL BE A GEOTEXTILE MEETING THE APPROVAL OF THE ENGINEER AND HAVING A GRAB TENSILE STRENGTH OF 180 LBS. (ASTM D-4632) AND AN APPARENT OF 50 TO 100 (ASTM D-4751). COST OF FURNISHING AND INSTALLING THE FILTER CLOTH WILL BE CONSIDERED COMPLETELY COVERED BY THE CONTRACT UNIT PRICE FOR OTHER ITEMS.
7. THE DESIGN SHALL SHOW AS A MINIMUM; THE DESIGN LOAD, DESIGN FILL HEIGHT, CONCRETE AND STEEL STRESS USED, AND THE FOLLOWING INFORMATION.

TABLE TO COMPLETED BY DESIGNER

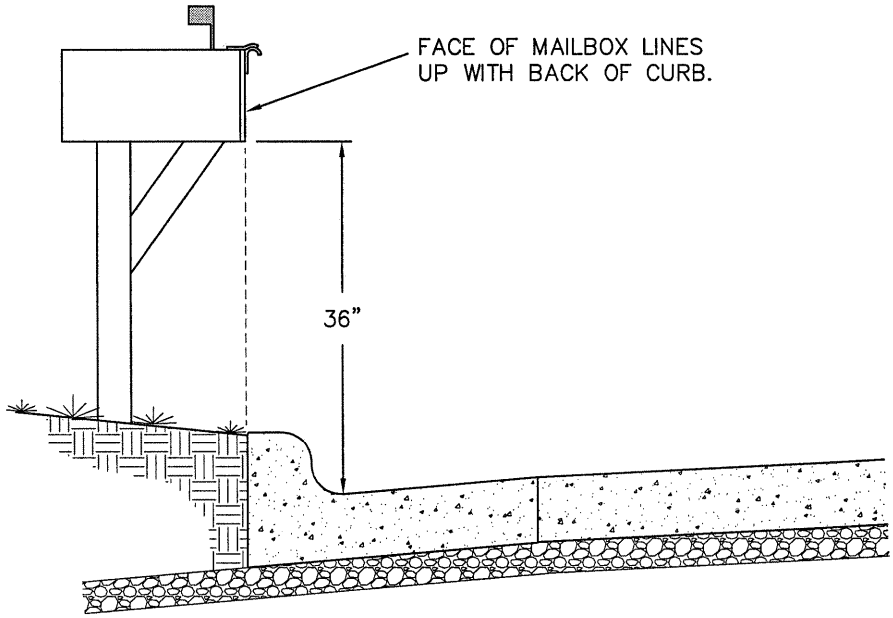
BAR	SIZE	C to C	LENGTH
A1			
A2			
B2			
J4			
P1			
F			

DESIGN LOAD _____

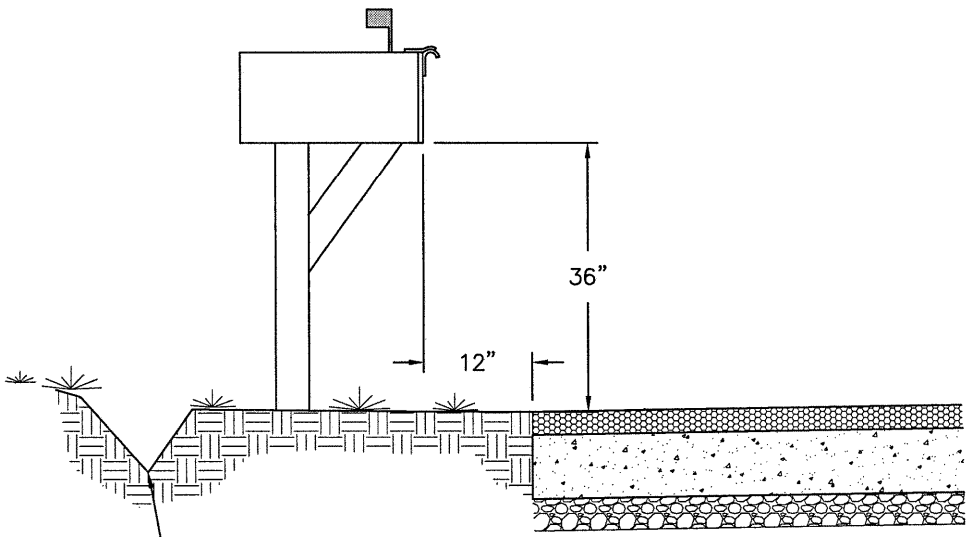
f'c _____

fy _____

DEPARTMENT OF PUBLIC WORKS SPRINGFIELD, MO.	**CONCRETE BOX CULVERT** MINIMUM REINFORCMENT DETAILS	ADOPTED: 10-1-04 SS-15



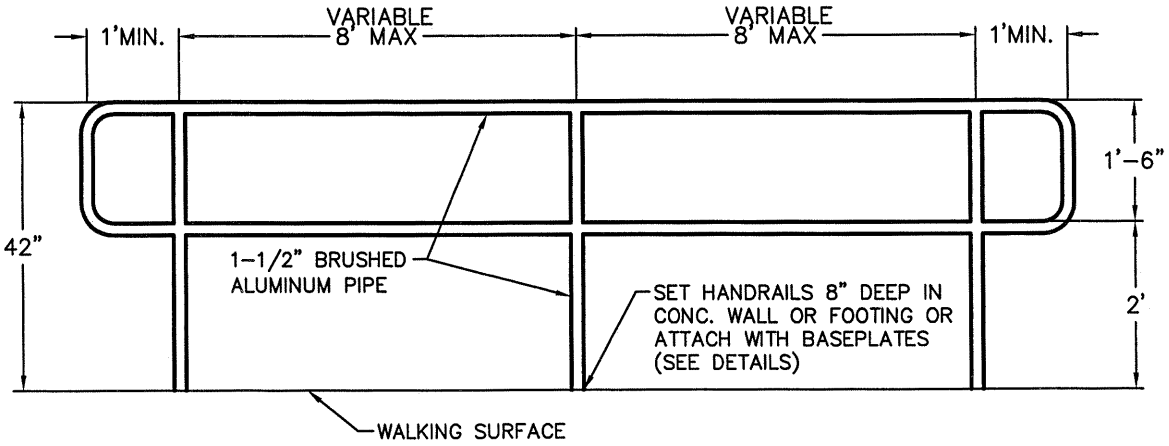
IMPROVED STREETS

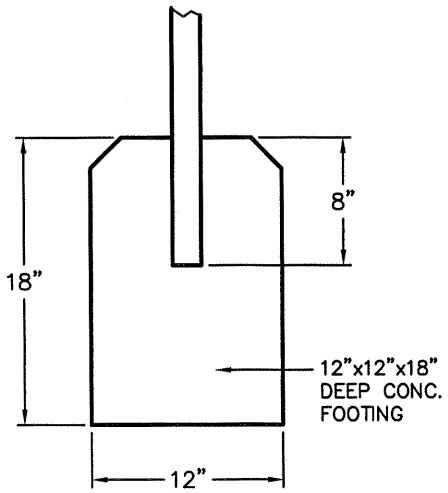


UNIMPROVED STREETS

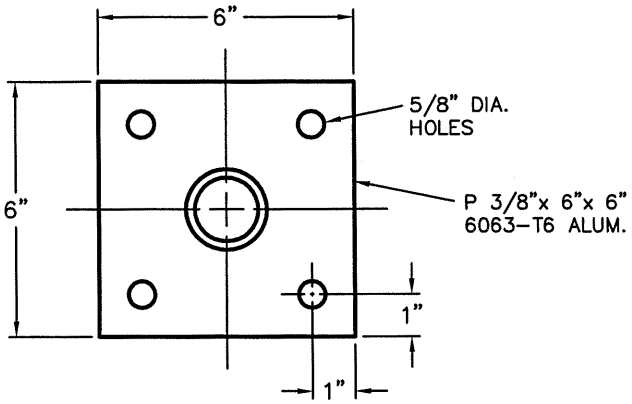
NOTE:
DITCH SECTION BEHIND MAILBOX
WITH A PEDESTRIAN CROSSING.

DEPARTMENT OF PUBLIC WORKS SPRINGFIELD, MO.	**MAILBOX REPLACEMENT**	ADOPTED: 10–1–04 ST–7

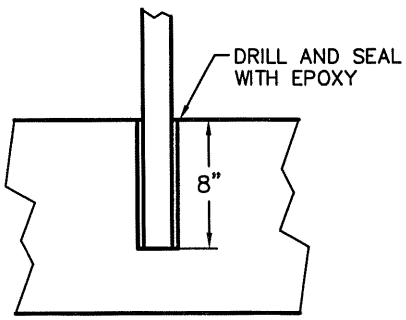




CONC. FOOTING DETAIL



BASEPLATE DETAIL



HEADWALL DETAIL

RAILING & POST SPECIFICATIONS		
TYPE	SIZE (DIA.)	WEIGHT (LBS./FT.)
ROUND	1-1/2"	ALUMINUM 0.940

GENERAL NOTES:

RAILINGS, POSTS, AND BASEPLATES SHALL BE ALUMINUM ALLOY 6061-T6 OR 6063-T6.

IF PRE-MANUFACTURED HANDRAIL COMPONENTS ARE TO BE USED, PRIOR APPROVAL IS REQUIRED.

ALL JOINTS SHALL BE CONTINUOUS WELDED.

DEPARTMENT OF PUBLIC WORKS SPRINGFIELD, MO.	HANDRAIL	ADOPTED: 10-1-04
		ST-18

PLAN REVIEW CHECKLIST FOR SANITARY SEWERS

Date: _____ District/Section: _____ File No.:_____

Subdivision: _____

Engineer: _____

GENERAL INFORMATION

Y	N	NA	
☐	☐	☐	Copy of the council-approved preliminary plat conditions has been provided which includes public improvement requirements, if development in City.
☐	☐	☐	Two sets of drawings on 24" X 36" paper submitted.
☐	☐	☐	Plans sealed, signed, and dated by Professional Engineer.
☐	☐	☐	City title block on all sheets.
☐	☐	☐	Revisions noted.
☐	☐	☐	Mains sized for drainage basin.
☐	☐	☐	Offsite sewer easements provided.
☐	☐	☐	Minimum finished floor elevations shown on the cover sheet and plan sheet and are based on: 1. Minimal lateral connection flow line elevation at main springline (four inches (4") above flow line of an eight-inch (8") main); 2. Minimum lateral slope of ¼ inch per foot; 3. Maintain 18 inches of cover over top of lateral; 4. Serve entire lot based on proposed two-foot (2') contours.
		NOTE:	All minimum finished floor elevations must be shown on the final plat.
☐	☐	☐	Obtained State approval (if in state ROW).
☐	☐	☐	Obtained appropriate permit in Building Regulations to build within a floodplain.
☐	☐	☐	Submitted a sinkhole report and received a sinkhole permit in accordance with the sinkhole ordinance.
☐	☐	☐	Submitted copy of Land Disturbance Permit obtained from the Department of Natural Resources and accompanying sediment and erosion control plan, if development exceeds one (1) acres.

If sewers are proposed outside of the City Limits, in Greene County:

Y	N	NA	
☐	☐	☐	Submitted copy of current Title Commitment and Warranty Deed for entire sewer district property. (Irrevocable Petition and Consent to Annexation)
☐	☐	☐	Public Works provided with set of plans approved by Greene County Highway Department, if sewers are to be in county street right-of-way.

TITLE SHEET

Y	N	NA	
☐	☐	☐	Name of subdivision/improvement shown.
☐	☐	☐	Name, address, and zip code of developer/owner shown.
☐	☐	☐	Location sketch shown:
☐	☐	☐	1. Scale shown
☐	☐	☐	2. North arrow shown
☐	☐	☐	3. Two major streets shown
☐	☐	☐	Site Plan shown:
☐	☐	☐	1. Legal description given (subdivision and/or sewer district boundary)
☐	☐	☐	a. reference made to land tie, existing subdivison or other known point
☐	☐	☐	b. bearings and distances shown on plan and in written form
☐	☐	☐	c. elevation contours shown over the entire sewer district
☐	☐	☐	d. lot lines and dimension shown
☐	☐	☐	2. Two City benchmarks referenced
☐	☐	☐	3. North arrow shown
☐	☐	☐	4. Correct scale shown (1" = 40' or other appropriate)
☐	☐	☐	Neighboring subdivision name and lot numbers shown if affected by sewer or needed for boundary description information.
☐	☐	☐	Consultant's name, address, zip code, and phone number shown.
☐	☐	☐	Manholes on title sheet labeled.
☐	☐	☐	Sections of the main indexed by sheet number.
☐	☐	☐	All applicable standard construction notes shown.
☐	☐	☐	The "One Call" stamp and phone number shown.

PLAN AND PROFILE SHEETS

Plan

Y	N	NA	
☐	☐	☐	Scale shown (1" = 40' horizontal, 1" = 4' vertical for undeveloped areas, 1" = 20' horizontal, 1" = 4' vertical for developed areas).
☐	☐	☐	North arrows shown.
☐	☐	☐	Line types defined (if not in standards).
☐	☐	☐	Existing easements shown with Book/Page numbers.
☐	☐	☐	Names shown of all landowners affected by project.
☐	☐	☐	New easements dimensioned and properly described.
☐	☐	☐	Two-foot (2') contours shown.
☐	☐	☐	Stationing of manholes shown.
☐	☐	☐	All other existing and proposed utilities and structures appear to be shown.
☐	☐	☐	Stationing in 50-foot intervals.
☐	☐	☐	Main placed in center of parkway where possible, otherwise is within an easement or right-of-way having five (5) feet of clearance from center of main.
☐	☐	☐	Manholes shown to not be within sidewalk.
☐	☐	☐	Bearings of main shown or angles at manholes shown with bearing reference.
☐	☐	☐	Station, size, and length of service lateral shown.
☐	☐	☐	All end-of-line manholes shown to be 15 feet past property line.
☐	☐	☐	The first upstream and downstream manhole elevations shown as shot in field, and any service laterals shown, if adding manhole to existing sewer.

Profile

Y	N	NA	
☐	☐	☐	Stationing shown.
☐	☐	☐	Scale shown (1" = 40', 1" = 4' for undeveloped areas, 1" = 20', 1" = 4' developed areas).
☐	☐	☐	Stationing of manholes shown.
☐	☐	☐	All other existing and proposed utilities and structure appear to be shown.
☐	☐	☐	Pipe slope, material, and size is given.
☐	☐	☐	Four feet (4') of cover maintained over all mains.
☐	☐	☐	If not possible to attain four (4) feet of cover, Class 200 PVC pipe present.
☐	☐	☐	Class 200 PVC pipe present at all locations where cover exceeds 12 feet.

☐	☐	☐	Plot minimum finished floor elevation at station shown on plan and Show Lot number, size, and length of lateral.
☐	☐	☐	Class 200 PVC pipe used if less than 18 inches clearance between top of sanitary sewer and bottom of storm sewer.
☐	☐	☐	Class 200 PVC pipe present from MH to MH if sanitary sewer within 18 inches vertical clearance of a water main. Also, note of the special testing procedures shown. (see B.5.b., page V-4).]
☐	☐	☐	Ductile iron pipe or concrete encasement present if ground cover of 18 inches impossible to attain (encasement normally used only at creek crossings).
☐	☐	☐	Note to place fill prior to sewer installation shown where fill proposed to attain four (4) feet of cover.
☐	☐	☐	Distance between manholes centers less than 400 feet.
☐	☐	☐	Minimum slope for eight (8) inch main 0.4 percent (0.5 percent preferred where possible).
☐	☐	☐	Concrete anchors along main shown if slope exceeds 15 percent.
☐	☐	☐	Casing and boring details shown with a minimum boring slope of one percent (1%).
☐	☐	☐	If utilizing existing sewer, all existing and proposed service connections are shown and all manhole lid and flow line elevations are given.

OTHER COMMENTS

I hereby certify I have checked the plans and review checklist for completeness, accuracy, compliance, and conformity with the plat, zoning and subdivision report, council bill, Public Works standards and specifications, and FEMA flood plain data. I further understand that review submittals without a signed checklist, incorrect subdivision title, inaccurate address for the developer, plans not conforming to the plat, or with more than a minimum of errors will be returned without comment. Also, mylars of the plans must be submitted within sixty (60) days of being requested on the review letter.

_____ _____

Date Professional Engineer's Signature